

THE CINCINNATI BICKFORD TOOL CO...

1½ H. P.  
9" DIAMETER  
COLUMN

**Super  
Service** PORTABLE HORIZONTAL  
DRILLING MACHINE



**BULLETIN-HR**

**THE SUPER SERVICE**

**PORTABLE HORIZONTAL  
DRILLING MACHINE**



• THE CINCINNATI BICKFORD TOOL COMPANY

**ESPECIALLY DESIGNED FOR EFFICIENT  
DRILLING WHERE PARTS ARE LARGE  
AND CUMBERSOME**

● This horizontal portable machine has been developed especially to assist in the production of **large** and **cumbersome** parts where certain drilling operations can best be handled with a portable machine. Work such as shown on the front cover, large body dies, and similar parts can be efficiently drilled, tapped, reamed, bored or faced by this relatively inexpensive machine. This SUPER SERVICE Portable Horizontal Machine has capacity for any drilling operation within the range of its 1½ H.P. driving motor.

## MOTOR

The motor is a directly connected, 1200 RPM, ball bearing, low starting current, high torque, totally enclosed, standard, reversing type. The starter providing overload and

low voltage protection with relay has a separately mounted start and stop push button control.

## SPEEDS

Six mechanical speed changes from 100 to 950 R.P.M. may be obtained through selective sliding gears. The direct reading speed

plate shows the operator the proper relative speed for each size drill.\*

## FEED

Only hand feed is provided on this machine. However, through the reduction gearing, power supplied at the feed hand-wheel is multiplied so as to effectively advance the maximum size spot facer or similar cutting tool. The feed trip can be set to disconnect this hand-wheel feed at any predetermined depth. The hand feed also automatically

trips out at the limit of the feed. A direct hand feed is, of course, possible using only the quick return levers. Note that the feed thrust is resisted at the center line of the column; the spindle extending through the column instead of being located to one side. Having the spindle center in line with the center-line of the column increases rigidity.

## SPINDLE & SLEEVE

The spindle and sleeve feed out together and have a 10" travel. The spindle is multi-splined and made of chrome nickel steel and is mounted on precision anti-friction bearings which take both thrust and radial loads.

These bearings are grease packed and are well protected against the ingress of foreign matter. The sleeve is also made of chrome nickel steel and is chromium plated and ground, providing a glass hard surface.

## HEAD

The bore in the head which guides the spindle sleeve is honed to insure a perfect, trouble-free fit with the spindle. The head is adjustable vertically on the column sleeve by the elevating hand-wheel which turns a

bronze nut on the stationary elevating screw. A single convenient lever clamps the head in place thus relieving the elevating screw of any strain.

## COLUMN

The column consists of a semi-solid sleeve which is mounted on two large diameter roller bearings resting on the stump and therefore can be rotated easily (360° if desired). The sleeve is internally ribbed in the plane of greatest stress to reduce deflection, thus increasing accuracy. When

this machine is ready to operate, the head, sleeve and stump are securely clamped in place, thus making a solid unit. It will be noted that the entire column has a 2' traverse on the base, this being controlled by the traverse hand-wheel.

## BASE

The base is ribbed to its full depth by heavy transverse and longitudinal ribs properly spaced to give maximum rigidity and minimum weight. A 12" x 24" recess is cast into the top of the base to provide a convenient carrying place for the necessary

tools that may be used with this machine. This machine may be transferred from one place to another by crane by means of the lifting ring, or by rolling along the floor manually.

## LEVELING

There is a leveling screw at each of the four corners of the base to facilitate tramming of this machine when it is raised off of the

three base wheels. The built in transverse and longitudinal levels aid in aligning this machine.

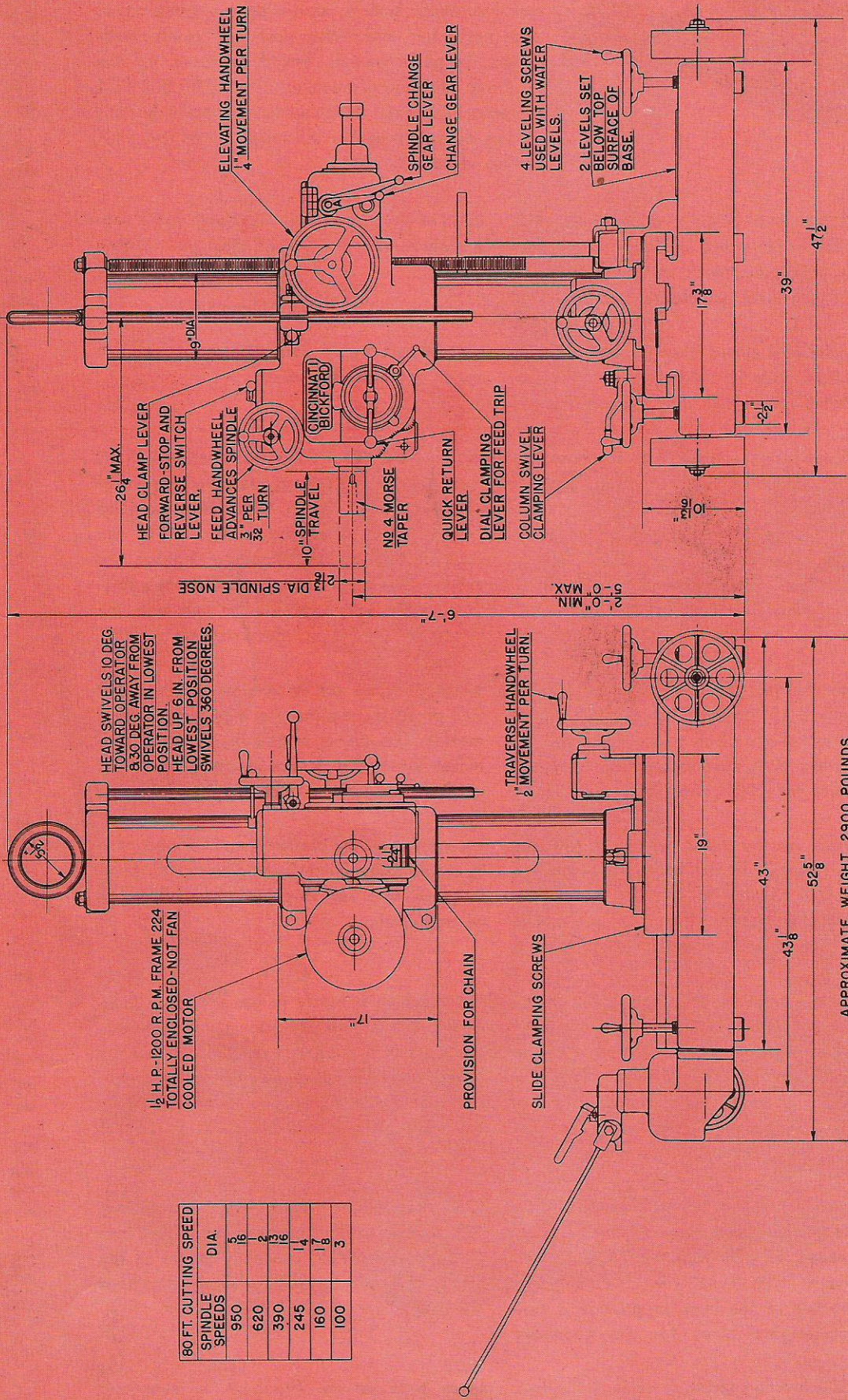
\*When a 25 cycle motor is used, a 1500 r. p. m. motor must be used. Spindle speeds will then be 125 to 1200 r. p. m.



80 FT. CUTTING SPEED	
SPINDLE SPEEDS	DIA.
950	5
620	16
390	2
245	16
160	14
100	17
	3

1/2 H.P. - 1200 R.P.M. FRAME 224  
TOTALLY ENCLOSED - NOT FAN  
COOLED MOTOR

HEAD SWIVELS 10 DEG.  
TOWARD OPERATOR  
8.30 DEG AWAY FROM  
OPERATOR IN LOWEST  
POSITION.  
HEAD UP 6 IN. FROM  
LOWEST POSITION  
SWIVELS 360 DEGREES.



APPROXIMATE WEIGHT 2900 POUNDS

## PORTABLE HORIZONTAL DRILLING MACHINE

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